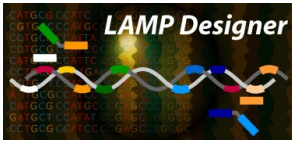# LAMP Designer Software

Design Primers for Loop Mediated Isothermal Amplification

LAMP Designer retrieves batches of sequences directly into the program from GenBank.

Performs BLAST search and avoids cross homologies while designing primers.

Supports Local and Desktop BLAST options for using local custom/unpublished databases.

Includes a sequence view with primers marked on it.

Calculates Tm using nearest neighbour thermodynamic theory and highly accurate SantaLucia values.

Exports a publication quality report for the assays designed for sharing with colleagues.
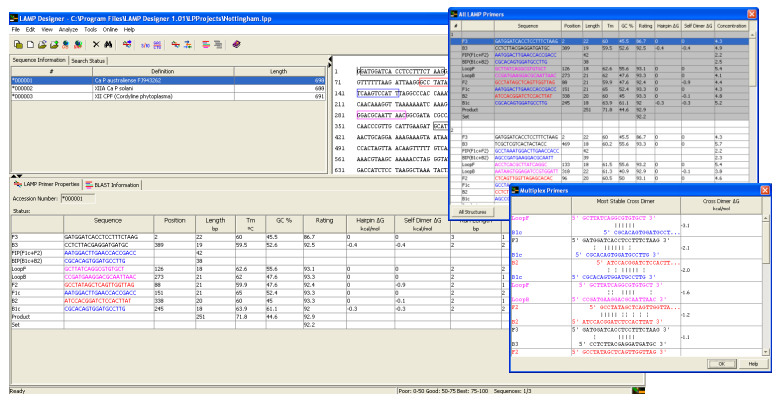
Organizes data in project format and maintains a local database of sequence information and search results.

Supported on latest operating system, Windows 7.

LAMP Designer designs efficient primers for Loop-Mediated Isothermal Amplification assays, that amplify DNA and RNA sequences at isothermal conditions, eliminating the necessity of a PCR setup. The technology relies on autocycling and DNA polymerase mediated strand displacement DNA synthesis, amplifying a few copies of DNA to 10^9 in as little as 30 minutes.

Reverse transcription coupled LAMP can be applied for amplification of RNA sequences.

LAMP employs six specially designed primers that recognize eight distinct regions in the target DNA. Hybridization of the six primers to the target DNA is a very crucial step for the efficiency of LAMP. The design of these six primers is therefore critical for a successful assay.

Avoid Cross Homologies

LAMP Designer automatically interprets BLAST search results and avoids those regions to design primers that have significant cross homologies with the database.

Verification BLAST

The primers can be BLAST searched against a database to verify their specificity.

Multiplex LAMP Primer Set

The primers designed for a sequence can be checked for multiplexing. The free energies of the most stable cross homologies between the primers designed, is displayed by the program.

Export Result

The designed primer sets, along with their properties, can be exported in standard csv or excel formats.

Data & Database Management

Multiple projects can be created. Data of multiple experiments can be easily managed by creating a separate project for each experiment. It maintains a local database for sequence information and search results.

Free 7 day Trial

Activate the program following these easy steps:

Install and launch LAMP Designer - Click Evaluate on the first window that opens - Enter the evaluation key requested from us.

OptiGene Limited

Unit 5 Blatchford Road   Horsham   West Sussex   RH13 5QR   UK
Tel: +44 (0) 1403 274980   Fax: +44 (0) 1403 271017
www.optigene.co.uk   info@optigene.co.uk